REMARKS

In the Office Action, the Examiner rejected Claims 1-15, which are all of the then pending claims, over U.S. Patent 5,842,195 (Peters, et al.). Specifically, Claim 1 was rejected under 35 U.S.C. §102 as being fully anticipated by Peters, et al, and Claims 2-15 were rejected under 35 U.S.C. §103 as being unpatentable over Peters, et al. Claims 1-7 were also rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter, and Claims 1-3 were further rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

The rejection of Claims 1-7 under 35 U.S.C. §101 and the rejection of Claims 1-3 under 35 U.S.C. §112 are respectfully traversed. Also, independent Claims 1, 4, 8 and 11 are being amended to better define the subject matters of these claims, and new Claims 16 and 17, which are dependent from Claim 4, are being added to describe preferred features of the invention.

For the reasons advanced below, Claims 1-3 are clear and definite and fully comply with the requirements of 35 U.S.C. §112, and Claims 1-7 are directed to statutory subject matter within the meaning of 35 U.S.C. §101. In addition, all of Claims 1-17 patentably distinguish over the prior art and are allowable. The Examiner is thus requested to reconsider and to withdraw the rejection of Claims 1-3 under 35 U.S.C. §112, and the rejection of Claims 1-7 under 35 U.S.C. §101. The Examiner is further asked to reconsider and to withdraw the rejection of Claim 1 under 35 U.S.C. §102, and the rejection of Claims 2-15 under 35 U.S.C. §103, and to allow Claims 1-17.

As discussed in detail in the present application, this invention relates to computer- and network- based questionnaires, and the invention provides an improved procedure for navigating among conditional questions and answers in computer- and network- based questionnaires. More specifically, the invention allows logic governing questions and answers to be specified in the computer file containing the questionnaire rather than implemented in software or a web page that displays the questions and receives the answers.

With respect to the rejection of Claims 1-3 under 35 U.S.C. §112, the Examiner argued, in the Office Action, that the steps of Claim 1 do not appear to have a consistent actor. Applicant respectfully submits that claims do not need to have a single or consistent actor; and, more specifically, the fact that the steps of a claim do not have or require a consistent actor does not make the claim indefinite.

The rejection of Claims 1-7 under 35 U.S.C. §101 is respectfully traversed because these claims are directed to a concrete, tangible subject – a method of operating a questionnaire. This is a specific and useful process. In the Office Action, the Examiner argued that the method as a whole may be implemented "outside of the technological arts." The "technological art" to which the method of Claims 1-7 belongs is the filed of operating questionnaires. This is not an abstract concept, but is a practical application.

Accordingly, Claims 1-7 are directed to statutory subject matter within the meaning of 35 U.S.C. §101, and the Examiner is asked to reconsider and to withdraw the rejection of these claims under 35 U.S.C. §101.

With regard to the rejections of Claims 1-15 under 35 U.S.C. §§102 and 103, Applicant notes that the focus of Peters, et al. is different from the focus of the present invention. Peters, et al. discloses a procedure for asking questions of computer users and for collating their responses and presenting those responses in a database. The focus of this invention is in providing a very flexible procedure for navigating within and between questionnaires.

This general difference between Peters, et al. and the present invention is reflected in a number of important, more specific differences.

The Peters' system is based on branching control language (BCL), which stores references to the next, the previous, and the final questions. In contrast, this invention navigates among questions without branching, based on what may be referred to as "structural navigation language" (SNL). This difference between the Peters' system and the present invention is analogous to unstructured versus structured ("GOTO-less") computer programming, and the former has been generally accepted as an inferior approach for more than twenty years due to the unnecessary complexity.

Peters' invention must store all possible destinations from a given set of conditions – and is therefore inherently error prone. Branching errors are only detectable by inspection or testing, so it is easy for them to go undetected. This is why Peters' invention warns of "orphan" and "cul-de-sac" errors. In contrast, this invention does not need to store any branch destinations, so such errors can be avoided. Furthermore, syntax errors may be automatically detected by the parser in this invention, so a separate scanning step, as in Peters' patent, is unnecessary.

Peters' branching is inherently order-dependent. So Peters' researcher must try to eliminate all branching errors on all paths, which can be too numerous to inspect or test exhaustively. In contrast, navigation in this invention is not order-dependent, so it is not necessary to inspect or test every path. Conditions within each individual set of nested conditions (everything between an outer-most IF and END IF) can be inspected separately, which is a much simpler task than inspecting/testing every path through a Peters' questionnaire.

Furthermore, the only way to navigate through a questionnaire defined with Peters' BCL is to start at the beginning and follow the links. This is in contrast to the present invention, where a questionnaire can be entered at any question – and the SNL navigation will still work correctly. This allows questionnaires built with this invention to be linked into the middle of other such questionnaires. It also allows the user to navigate randomly to any question whose conditions are currently satisfied. Neither of these capabilities is supported by Peters' patent.

Peters' patent covers conditional questions, but the present invention may be used with conditional questions and conditional answers (i.e., the answers the respondent must choose from).

Peters' questionnaires are delivered via e-mail, which is asynchronous, but the present invention can also be used to deliver questionnaires via web browsers or an XML-enabled application, which are synchronous. (In this context, "asynchronous" means navigation is statically defined in advance, while "synchronous" means the navigation is dynamically processed while the questionnaire is being answered.)

Peters' patent covers parsing at design time ("early binding"). This invention enables parsing at run time ("late binding"), which is more flexible. For example, once a Peters' questionnaire is sent by electronic mail, it can no longer be modified. Updated versions must be re-mailed to respondents, who may nevertheless respond to the previous version – particularly if they respond to e-mail in the order it was received. In contrast, a questionnaire based on the present invention can be modified by the researcher anytime. Respondents then see the updated version automatically whenever they access the questionnaire. Thus, it is easier to add, change, or delete questions when this invention is used.

Peters' patent covers conditions based on values derived from questions or database records, but not from the system. The present invention also allows conditions based on system provided values, such as the current date and time, current device type, active operating system, and active web browser. This allows the researcher to limit questions to specific time frames or system attributes. For example, respondents may be asked questions about swimsuits only during summertime. They may not be asked about a particular sporting event until the day of that event, and there may be different questions depending on whether the respondent is using a computer, a PDA, or a cell phone.

Each of the independent Claims 1, 4, 8 and 12 clearly describes important differences between the claims and Peters, et al. Specifically, Claim 1 describes the steps of providing a plurality of questions in one or more questionnaires; and parsing statements including conditions governing said questions to translate language containing conditions into stored conditions, said stored conditions being stored in an associated computer file. Also, Claims 4 and 12 describe the step of parsing statements including conditions governing each of at least some of the questions to translate language containing conditions into stored conditions

associated with said each of at least some of the questions, said stored conditions being stored in an associated computer file. Claim 8, which is directed to a system for operating a questionnaire, describes means for performing this parsing.

This parsing is of significant utility. This parsing of the statements containing the conditions is much more than simply separating question components. The parsing translates the language containing conditions (for example, as shown in the left column if Figure 2 of this application) into stored conditions (for example, as shown in the right column of Figure 2). With the preferred embodiment of the invention, this parsing includes (a) keeping tack of nesting levels for each question, (b) concatenating conditions each time another nesting level is encountered, and (c) negating conditions each time the ELSE leg of a conditional is encountered.

This parsing would not have been obvious to someone of ordinary skill because it allows the conditions to be correctly evaluated when moving through the conditions from top to bottom ("forward"), from bottom to top ("backward"), or in random order. Virtually all parsing of expressions written in computer programming languages is done in only one direction (typically from top to bottom). Likewise, evaluation of expressions is also done in just one direction, except when a loop or branch temporarily alters the normal flow. There is no computer programming language that is routinely evaluated bi-directionally or in random order, as can be done with the present invention.

The other references of record have been reviewed, and these other references, whether considered individually or in combination, also do not disclose or suggest the above-discussed parsing of the present invention.

Because of the above-discussed differences between Claims 1, 4, 8 and 12 and the prior art, and because of the advantages associated with those differences, Claims 1, 4, 8 and 12 patentably distinguish over the prior art and are allowable. Claims 2 and 3 are dependent from, and are allowable with, Claim 1; and Claims 5-7, 16 and 17 are dependent from Claim 4 and are allowable therewith. Also, Claims 9-11 and Claims 13-15 are dependent from Claim 8 and Claim 12, respectively. Accordingly, the Examiner is respectfully asked to reconsider and to withdraw the rejection of Claim 1 under 35 U.S.C. §102 and the rejection of Claims 2-15 under 35 U.S.C. §103, and to allow claims 1-17.

For the reasons discussed above, the Examiner is requested to reconsider and to withdraw the rejection of Claims 1-3 under 35 U.S.C. §112 and the rejection of Claims 1-7 under 35 U.S.C. §101. The Examiner is also asked to reconsider and to withdraw the rejection of Claim 1 under 35 U.S.C. §102 and the rejection of Claims 2-15 under 35 U.S.C. §103, and to allow Claims 1-17. If the Examiner believes that a telephone conference with Applicant's Attorneys would be advantageous to the disposition of this case, the Examiner is requested to telephone the undersigned.

Respectfully submitted,

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